

Biosciences Career Pathway

MISSOURI ECONOMIC RESEARCH & INFORMATION CENTER
MISSOURI DEPARTMENT OF HIGHER EDUCATION
& WORKFORCE DEVELOPMENT
NOVEMBER 2023

What are Career Pathways?

Career Pathways are groups of occupations within a career field. Occupations within a pathway share common skills, knowledge, and interests. The pathways use industry-recognized credentials and are examples of how different levels of training or education can help provide opportunities for career advancement.

Missouri Numbers:



3,327 Employers



48,628 Workers



\$77,615 Average Wage

Why Have a Career in Biosciences?

Developments in biotechnology rapidly change the way we live, work, and learn.

Missouri has a strong presence in Plant and Agricultural Technology, Biomedicine, and Companion and Feed Animal Sciences. Biosciences represents 2 percent of total private sector employment, employing over 48,000 workers in 3,327 businesses in 2022.

Employment has been growing at an average of 2 percent per year from 2017 to 2022. Missouri has high employment concentrations in Biosciences, particularly in *Animal Food Manufacturing*, *Hog & Pig Farming*, and *Agricultural Chemical Manufacturing*. Biosciences industry wages averaged \$77,615 in 2022, higher than the state average of \$54,520 for all industries.

From research to production, there are a variety of innovative and rewarding careers in the Biosciences fields of Production, Research & Development, and Animal Sciences.

Know the Basics

Biosciences deals with how living things work and interact with each other, and teaches how to ask questions, make observations, and solve problems. Soft skills, such as interpersonal skills, professionalism, and dependability are important in all industries and occupations, including Biosciences. Biosciences deals heavily with research and production, so knowledge of mathematics and scientific principles is a must. Safety and quality control are a critical part of this industry, so attention to detail and continuous learning are necessary.

Skills needed for Success:

Biosciences has a set of industry-wide technical competencies that represent the knowledge and skills necessary to be successful in this industry. Research and development; manufacturing process design and development; knowledge of medical devices, drugs, and pharmaceuticals; as well as knowledge of agricultural feedstock and chemicals are some of the skills that may be needed for success.

Who's Hiring in Missouri?

Bayer Corporation

Pfizer

MilliporeSigma

Bunge

Merck & Company



Production

Research & Development

Animal Sciences

Now

Short-Term On-the-Job Training

Helpers-Production Workers
Entry: \$29,980 Average: \$34,370

**Weighers, Measurers, Checkers,
& Samplers, Recordkeeping**
Entry: \$35,910 Average: \$42,080

**Farmworkers, Farm, Ranch, &
Aquacultural Animals**
Entry: \$28,070 Average: \$32,940

Certificates: Forklift Operator

Degrees: Chemistry
Certificates: American Society for
Quality (ASQ), Certified Quality
Auditor

Certificates: Certified Manager of
Animal Resources

Next

Certificate, Associate Degree, Apprenticeship, Moderate- to Long-Term On-the-Job Training

**First-Line Supervisor of
Production Workers**
Entry: \$48,130 Average: \$64,760

Industrial Machinery Mechanics
Entry: \$42,930 Average: \$55,970

**Chemical Equipment Operators
& Tenders**
Entry: \$38,310 Average: \$50,430

Degrees: Industrial Mechanics
and Maintenance
Certificates: Commercial
Driver's License, Chemical
Operator

Chemical Technicians
Entry: \$37,680 Average: \$48,950

**Agricultural & Food Science
Technicians**
Entry: \$37,045 Average: \$47,990

**Inspectors, Testers, Sorters,
Samplers, & Weighers**
Entry: \$38,250 Average: \$49,140

Degrees: Chemistry
Certificates: American Society
for Quality (ASQ), Certified
Quality Auditor

**Veterinary Technologists &
Technicians**
Entry: \$30,640 Average: \$37,480

**Veterinary Assistants &
Laboratory Animal Caretakers**
Entry: \$27,620 Average: \$30,850

Certificates: Veterinary
Technician/Technologist,
Laboratory Animal Technician

Later

Bachelor's Degree or Advanced Degree

Industrial Production Managers
Entry: \$79,400 Average: \$110,040

Chemists
Entry: \$57,570 Average: \$83,650

Chemical Engineers
Entry: \$69,870 Average: \$98,230

Medical Scientists
Entry: \$66,500 Average: \$92,800

Degrees: Engineering,
Business Administration &
Management

Degrees: Chemistry, Clinical
Laboratory Science/Technologist,
Chemical Engineering

Veterinarians
Entry: \$75,520 Average: \$95,690

Degrees: Animal Sciences,
Horticultural Operations,
Veterinary Medicine

Sources:

Lightcast™

Employment and Training Administration, Competency Model Clearinghouse

2022 Occupational Employment Survey Wage data, U.S. Bureau of Labor Statistics

Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics

Top employers data is based on 2022 online job ads



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